



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Tokuju OIKAWA

Serial No. 09/928,339

Group Art Unit:

1752

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Examiner: Thorl Chea

For: PHOTOTHERMOGRAPHIC MATERIAL

DECLARATION UNDER 37 CFR 1.132

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Honorable Commissioner of Patents and Trademarks,  
Washington, D.C. 20231

Sir:

I, Haruo NAKANO, a Japanese citizen, having a post office address of c/o Fuji Photo Film Co., Ltd., No.210, Nakanuma Minami-ashigara-shi, Kanagawa 250-0123 Japan, hereby declare and state that I received a Master of Engineering Degree in 1993 from Nagoya University, Department of Applied Chemistry. I was employed by Fuji Photo Film Co., Ltd. in 1993 and since that time I have been principally engaged in research of separation analysis of chemical compounds at the Ashigara Research Laboratories of said company.

I declare further that I have read all of the documents contained in the file wrapper of the above-entitled application.

I declare further that the test described below was conducted at my direction and under my supervision and the test results are true and correct to the best of my knowledge.

Method:

An amount of  $\text{NH}_4^+$  in LACSTAR 3307B (SBR latex manufactured by Dainippon Chemicals & Ink Co., Ltd.) was determined as follows. LACSTAR 3307B was used as binder for emulsion layers of samples of Example 1-2 disclosed in Hirano et al. (See column 83 of Hirano et al.), Example 1 disclosed in Inoue et al. (See column 43 of Inoue et al.) and Example 1 disclosed in JP'072 (See column 267 of the JP'072 translation).

0.5 g of undiluted solution of LACSTAR 3307B was weighed and added to 20 mL of ethyl alcohol. The solid and solution were separated by centrifugation (16,000 rpm, 20 min), and the solution was evaporated to dryness by an evaporator. The dried material was dissolved in water and the obtained solution was measured fixed volume, thereby obtaining a sample for determination of  $\text{NH}_4^+$ .

$\text{NH}_4^+$  was determined by the results of ion chromatographic analysis, utilizing a calibration curve which was obtained by measuring the signal from a standard of one point known concentration.

Result:

The amount of  $\text{NH}_4^+$  in the undiluted solution of LACSTAR 3307B, of which amount as solid was 50 %, was 650 ppm (650  $\mu\text{g}/1\text{ g}$ ).

The result indicates that  $\text{NH}_4\text{OH}$  was added to LACSTAR 3307B as pH modifier.

As disclosed in lines 4 to 16 on page 34 of the specification, in order

to obtain photothermographic materials of which film surface pH are substantially unchanged, ammonia cannot be substantially added to the layers formed on the image-forming layer side of the support. If LACSTAR 3307B is used as binder for a layer on a support, film surface pH of the layer is changed after coating since  $\text{NH}_4\text{OH}$ , which is a volatile base, in binder volatilizes not only during coating process and heat development but also during storage. Since SBR latex, which did not contain  $\text{NH}_4^+$ , were used as binder and  $\text{NaOH}$ , which was not volatile base, were used as pH modifier in Samples No 2-6 and 2-7 in Table 2 in the present specification, the film surface pH of these samples could be substantially unchanged (See the column of "Film surface pH" in Table 2). As further shown in Table 2, these samples show much less temperature and humidity dependency than comparative samples not being satisfying Condition (II).

As above mentioned, LACSTAR 3307B was used as binder for emulsion layers of samples of Examples in the references. I believe that the film surface pH of these samples would be changed after coating since  $\text{NH}_4\text{OH}$  volatilizes and that the samples disclosed in Hirano et al., Inoue et al. and JP'072 could not satisfy Condition (II) claimed in the present invention. Namely, I believe that claimed materials would be far different from materials taught or suggested in the reference.

Since all of Hirano et al., Inoue et al. and JP'072 are silent of film surface pH fluctuation and further, according to JP'072, ammonia would rather be desirable for pH modifier (See column 0100 in JP'072), I believe that no one skilled in the art would not been motivated to reduce fluctuation of film surface pH by the references. I also believe that no one skilled in the art could have predicted that little temperature and humidity dependency can be obtained by satisfying Condition (II) in the claimed

present invention.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Dated this 24 day of October, 2002.

Haruo Nakano

Haruo NAKANO